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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/341,287      | 08/19/1999  | JOHN G. WOODS        | LC-302/PCT/U        | 4956             |

7590 02/20/2002

Loctite Corporation  
Legal Department  
1001 Trout Brook Crossing  
Rocky Hill, CT 06067

EXAMINER

WILSON, DONALD R

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1713

DATE MAILED: 02/20/2002

17

Please find below and/or attached an Office communication concerning this application or proceeding.

FD-17

|                              |                 |  |              |  |
|------------------------------|-----------------|--|--------------|--|
| <b>Office Action Summary</b> | Application No. |  | Applicant(s) |  |
|                              | 09/341,287      |  | WOODS ET AL. |  |
|                              | Examiner        |  | Art Unit     |  |
|                              | D. R. Wilson    |  | 1713         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2001.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-44 is/are pending in the application.
- 4a) Of the above claim(s) 29,30,32,33 and 38-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-28,31,34-37,43 and 44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
    If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
        1. ☐ Certified copies of the priority documents have been received.  
        2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
    \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
    a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s). <u>13</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                 |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____.   |

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## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment and declaration filed 11/5/01, have been fully considered with the following results.
2. The objection to new matter under 35 U.S.C. § 132, and the rejections under 35 U.S.C. § 112, first and second paragraph, are overcome by the amendment and the objection and rejections are withdrawn.
3. The amendment and declaration are not deemed to be persuasive in overcoming the outstanding prior art rejections which are maintained as is discussed below.

### *Previously Cited Statutes*

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *35 U.S.C. § 103(a) Rejection*

5. **Claims 23-28, 31, 34-37 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Admissions by Applicant, Merck Index, Wu and Yoshino, in further view of Wu or Yoshino.** The basis of this rejection was stated in Detailed Action § 13 of the Office action of 10/3/00, and has been discussed further in Detailed Action § 13 to § 16 of the Office Action of 3/6/01, Additional Comments § 5 to § 8 of the Office action of 5/1/01, and Detailed Action § 12-16 of the previous Office Action.
6. **Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Admissions by Applicant, Merck Index, Wu and Yoshino, in further view of Wu or Yoshino as applied to claims 23-28, 31, 34-37 and 43-44 above, and further in view of Admissions by Applicant.** The basis of this rejection was stated in Detailed Action § 17-18 of the previous Office Action.
7. In regards to the new Claims 43-44, it is not seen that the molecular weight limitations make the claims patentably distinct over the prior art which has been previously discussed in regards to the molecular weights.

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8. Applicant collectively traverses the rejections arguing that *"[t]here simply is no suggestion in any combination of the previously cited or presently cited references that provide motivation for a person of ordinary skill in the art to replace ethylene oxide with ethylene carbonate and further replace a tertiary amine catalyst with a phase transfer catalyst."* Applicant does not further discuss the phase transfer catalyst and apparently relies upon earlier arguments which are not deemed to be persuasive for reasons of record. Applicant goes on to state a conclusion that *"[t]he toxicity of a chemical alone is insufficient to provide the requisite motivation, which is missing in the above cited references, to replace ethylene oxide with ethylene carbonate ---"*. Applicant attempts to support this conclusion with a declaration by Dr. Alberino, which has been given careful consideration, but is not deemed sufficiently persuasive for reasons which follow.

9. In regards to Dr. Alberino's declaration the Examiner agrees that ethylene carbonate is about twice as expensive as ethylene oxide in bulk quantities and requires about twice as much to achieve the same degree of hydroxylation. However, all hydroxylations are not necessarily done on a large scale and the costs of handling and transporting ethylene oxide on a small scale can easily result in a much higher cost for the ethylene oxide. To demonstrate this one only needs to look at a chemical supply catalog which shows that that 225 g of ethylene oxide costs \$150.00 whereas 500 g of ethylene carbonate would only cost about \$11.00, a factor of greater than ten less for equivalent alkylation (see Aldrich). Aldrich is a 1994-95 catalog, but is doubted that the relative economics would be much different today.

10. The statement that nearly all chemicals in the chemical industry, including ethylene oxide, are toxic to some degree, with the inference that ethylene oxide is no different than other industrial chemicals is misleading. Only a limited number of industrial chemicals would fall into the category of being an explosive gas as well as being reasonably anticipated to be a carcinogen as has been pointed out in the Merck reference. Applicant's themselves have pointed out that *"[e]thylene oxide, however, is a gaseous and hazardous material which is highly toxic, and at least for this reason is undesirable as a reactant"* (instant specification page 2, lines 12-14).

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11. The Examiner would agree that simply because a material is a hazard it does not automatically follow that there couldn't be sufficient incentive to use the hazardous material, if it is economical to take the necessary precautions in handling such a material. However, this does not lead to a conclusion for all applications as declarant has done that "*--- the toxicity of ethylene oxide alone would not provide sufficient motivation to replace ethylene oxide with ethylene carbonate.*" Applicant's own admission within the specification, as well as the added teachings of Merck Index, Wu and Yoshino show that one of ordinary skill in the art would find a sufficient motivation to replace ethylene oxide with ethylene carbonate as a reagent for hydroxyalkylation. Applicant is reminded that,

"There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-1458 (Fed. Cir. 1998).

12. The further argument that ethylene carbonate produces by-product carbon dioxide which has to be disposed of is interesting but is not seen to offset the motivation to use ethylene carbonate. Carbon dioxide is well known as a relatively safe material to handle and dispose of as for instance is demonstrated by it being a major effluent of animal life, automobiles and power plants.

**Action Is Final**

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

14. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. This application contains Claims 29-30, 32-33 and 38-42 drawn to an invention nonelected with traverse in Paper No. 7. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

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***Future Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. R. Wilson whose telephone number is 703-308-2398.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 703-308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications. The unofficial direct fax phone number to the Examiner's desk is 703-872-9029.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-2351.

A handwritten signature in black ink, appearing to read 'DRW', with a stylized flourish at the end.

D. R. Wilson  
Primary Examiner  
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